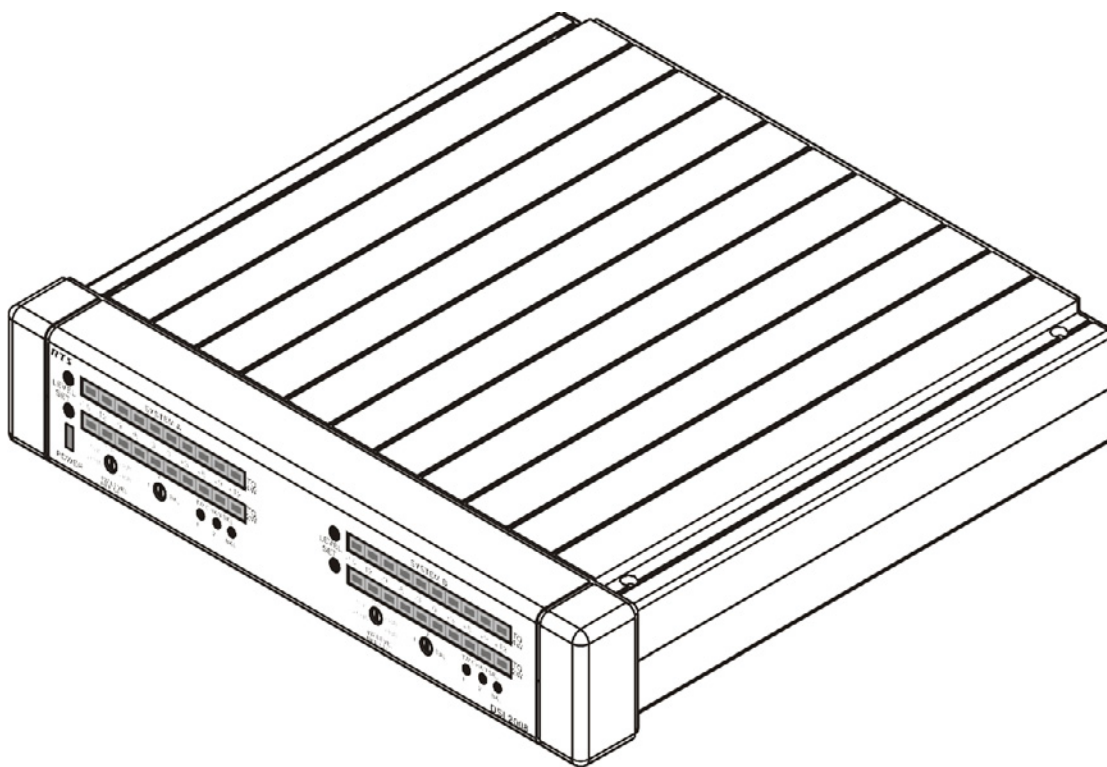


# *User Instructions*

## *DSI 2008 Digital System Interface*

*ADAM, ADAM CS, and Zeus Intercoms*



## **PROPRIETARY NOTICE**

The product information and design disclosed herein were originated by and are the property of Telex Communications, Inc. Telex reserves all patent, proprietary design, manufacturing, reproduction, use and sales rights thereto, and to any article disclosed therein, except to the extent rights are expressly granted to others.

## **COPYRIGHT NOTICE**

Copyright 2008 by Telex Communications, Inc. All rights reserved. Reproduction, in whole or in part, without prior written permission from Telex is prohibited.

## **WARRANTY NOTICE**

See the enclosed warranty card for further details.

## **CUSTOMER SUPPORT**

Technical questions should be directed to:

Customer Service Department  
RTS/Telex Communications, Inc.  
12000 Portland Avenue South  
Burnsville, MN 55337 USA  
Telephone: 800-392-3497  
Fax: 800-323-0498

## **RETURN SHIPPING INSTRUCTIONS**

Customer Service Department  
Telex Communications, Inc. (Lincoln, NE)  
Telephone: 402-467-5321  
Fax: 402-467-3279  
Factory Service: 800-553-5992

Please include a note in the box which supplies the company name, address, phone number, a person to contact regarding the repair, the type and quantity of equipment, a description of the problem and the serial number(s).

## **SHIPPING TO THE MANUFACTURER**

All shipments of product should be made via UPS Ground, prepaid (you may request from Factory Service a different shipment method). Any shipment upgrades will be paid by the customer. The equipment should be shipped in the original packing carton. If the original carton is not available, use any suitable container that is rigid and of adequate size. If a substitute container is used, the equipment should be wrapped in paper and surrounded with at least four (4) inches of excelsior or similar shock-absorbing material. All shipments must be sent to the following address and must include the Proof of Purchase for warranty repair. Upon completion of any repair the equipment will be returned via United Parcel Service or specified shipper, collect.

Factory Service Department  
Telex Communications, Inc.  
8601 East Cornhusker Hwy.  
Lincoln, NE 68507 U.S.A.  
Attn: Service

# Table of Contents

---

<b>DESCRIPTION AND SPECIFICATIONS .....</b>	<b>1</b>
<i>General Description .....</i>	<i>1</i>
<i>Features .....</i>	<i>1</i>
<i>Front and Back Panel Descriptions .....</i>	<i>2</i>
FRONT PANEL .....	2
BACK PANEL .....	3
<i>Specifications .....</i>	<i>4</i>
<b>INSTALLATION .....</b>	<b>5</b>
<i>Mounting .....</i>	<i>5</i>
<i>4-Wire Audio Connections .....</i>	<i>5</i>
ADAM, ADAM-CS, OR ZEUS AUDIO CONNECTION .....	5
AUDIO CONNECTIONS FOR THE OTHER 4-WIRE COMMUNICATIONS SYSTEMS .....	6
<i>2-Wire Audio Connections .....</i>	<i>7</i>
RTS TW AUDIO CONNECTIONS .....	7
AUDIOCOM AUDIO CONNECTION .....	8
CLEAR-COM AUDIO CONNECTION .....	9
OTHER 2-WIRE AUDIO CONNECTION .....	9
<i>4-Wire Call Signal Connections .....</i>	<i>10</i>
CALL SIGNAL CONNECTION FOR ADAM, ADAM CS, AND ZEUS .....	10
CALL SIGNAL CONNECTIONS FOR OTHER 4-WIRE COMMUNICATIONS SYSTEMS .....	13
4-wire Call Send and Call Enable/Inhibit .....	13
4-wire Call Receive .....	14
<i>2-Wire Call Signal .....</i>	<i>14</i>
CALL SIGNAL CONNECTIONS FOR AUDIOCOM, RTS TW AND CLEAR-COM .....	14
CALL SIGNAL CONNECTIONS FOR OTHER 2-WIRE COMMUNICATION SYSTEMS .....	15
<b>OPERATION .....</b>	<b>17</b>
<i>General Instructions .....</i>	<i>17</i>
<i>Operating Notes for ADAM, ADAM CS and Zeus Intercom Systems .....</i>	<i>18</i>
<b>ACCESS AND CONFIGURATION .....</b>	<b>19</b>
<i>Internal Access .....</i>	<i>19</i>
<i>Mode Dip Switch Settings U301 .....</i>	<i>20</i>
<i>Call Signal Option Card Installation .....</i>	<i>21</i>

---



---

# *Description and Specifications*

---

---

## *General Description*

The DSI 2008 Dual Digital Hybrid interfaces two, 2-wire intercom lines to two, 4-wire intercom lines. Unlike earlier analog hybrids, the DSI 2008 features advanced digital signal processing to achieve automatic nulling of the 2-wire lines. Plus, each hybrid features convenient peak-reading level meters to quickly match the levels between the lines that are being interfaced. The result is easy and accurate setup. With the DSI 2008, all need for test tones, nulling adjustments and ducking adjustments have been eliminated.

Compatible 2-wire intercom systems include RTS™ TW, Audiocom®, and Clear-Com®. Compatible 4-wire intercom systems include Telex's ADAM™, ADAM CS™, and Zeus™ Digital Matrix Intercom Systems.

The DSI 2008 is also available with optional call signal interfacing. This option provides bi-directional call signal compatibility between the 2-wire and 4-wire intercom systems.

With features like digital signal processing, peak-reading level meters and option call signal interfacing, the DSI 2008 Dual Digital Hybrid assures ease of setup maximum transparency between intercom systems.

---

## *Features*

**Two Independent Hybrids:** Interface two separate 2-wire lines to two separate 4-wire lines.

**Automatic Nulling:** Digital hybrids eliminate all nulling and ducking adjustments. Quick, trouble-free setup. Puts an end to concerns about echo and feedback when interfacing 2-wire lines.

**Peak Reading Level Meters:** Quick and accurate visual audio level adjustment. No extra setup equipment or guesswork is required.

**Direct ADAM/Zeus Audio Connection:** Accepts standard ADAM/Zeus DB-9 or RJ-11 keypanel cables.

**Transformer Isolated:** All audio inputs and outputs are transformer isolated to prevent ground loops and hum.

**Call Signal Option:** Detects call signals from any of the compatible 2-wire intercom systems, and then provides a +5 VDC output to the 4-wire intercom system. Accepts a contact closure input from the 4-wire system and converts it to the call signal format required by the 2-wire system. The DSI 2008 can be directly connected to an ADAM, ADAM CS, or Zeus GPI (General Purpose Interface). GPI inputs can be programmed to activate call signals and audio paths to any of the available types of communication with the 4-wire system, including intercom ports, camera ISO circuits, IFB circuits, etc. GPI outputs

can be set up to place calls only from a specific keypanel within the 4-wire system, or from any keypanel within the 4-wire system that wishes to call the 2-wire system.

**Half-rack Wide, 1RU High:** Two DSI 2008s fit into a single rackspace. Compatible with RTS TW rack mount hardware. Can be mixed with other TW equipment.

**Universal Power Pack:** Ready for worldwide use. Automatically accepts any main voltage from 100-250 VAC, 50/60 Hz. Power pack equipped with locking DIN connector for attachment to the DSI 2008.

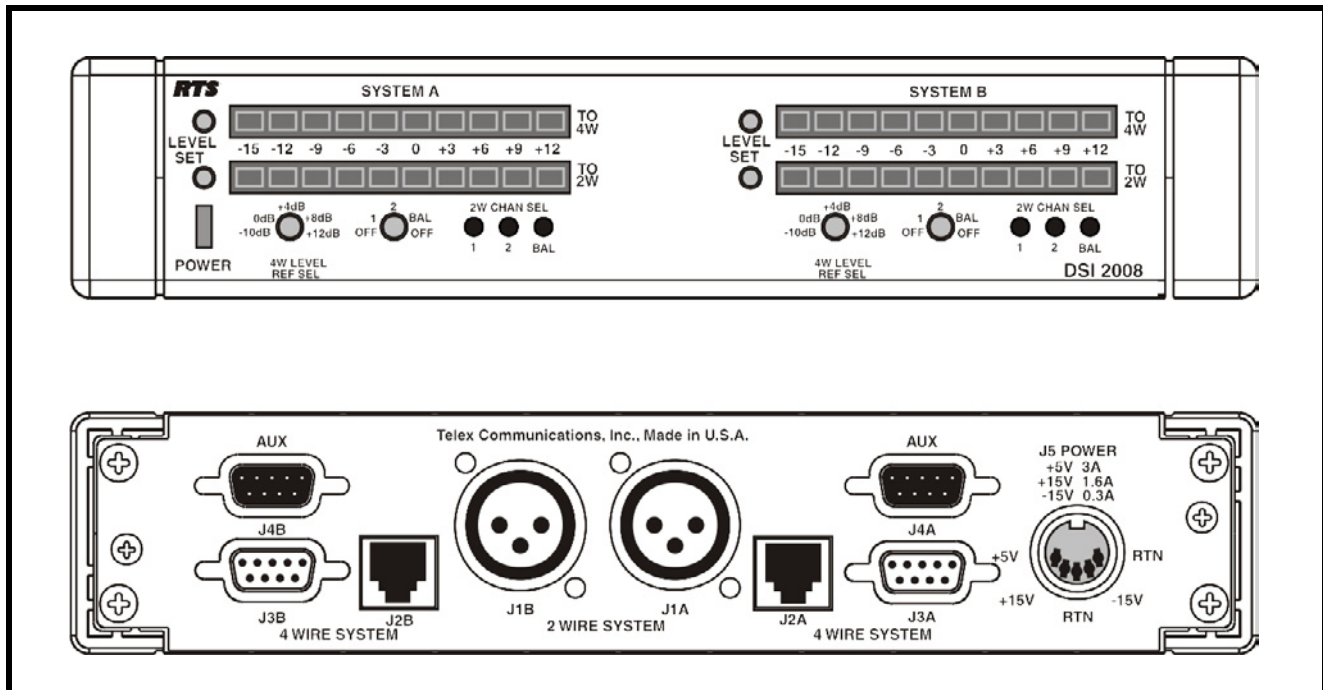


FIGURE 1. DSI 2008 Reference View

## Front and Back Panel Descriptions

### Front Panel

There is a power ON/OFF and call indicator at the left of the front panel. This indicator lights continuously when the DSI 2008 is turned ON and flashes when an incoming call signal is detected, if the call signal option board is installed.. The remainder of the front panel is divided into controls and indicators for the two separate hybrids, labeled SYSTEM A and SYSTEM B. For each hybrid, there is a 10-segment, peak reading level meter to display the 4-wire output level (TO 4W). There is a recessed level set control to the left of the 4-wire meter (LEVEL SET) and there is also a recessed, 5-position range select control for the 4-wire output (4W LEVEL REF SEL). Under the 4-wire meter, is an identical meter for the 2-wire output level, and there is a recessed level set control for the 2-wire output to the left of the meter. Under the 2-wire meter, there is a recessed, 5-position selector. The selector has two OFF positions for when no 2-wire input is connected. The three remaining switch positions select the 2-wire system as follows: position 1 selects RTS TW channel 1; position 2 selects RTS TW channel 2 or a Clear-Com channel; the BAL position selects an Audiocom balanced channel. There are 3 LED indicators to display the current selection.

---

## **Back Panel**

The power pack connector is located at the right end of the back panel. This is a locking DIN connector. The remainder of the back panel is divided into connectors for the two separate hybrids. Connectors are labeled with “J” numbers followed by “A” or “B” to indicate System A or System B. For each hybrid, there is an AUX connector. This is used to connect to/from the optional call signal card. Below the AUX connector, there are both a DB-9F connector and an RJ-11 connector for 4-wire intercom connection. These are directly compatible with standard ADAM/Zeus keypanel cables. Next to the 4-wire connectors, there is a 3-pin female XLR audio connector for connection to the 2-wire intercom system.

---

# Specifications

## 2-Wire Ports

Input / Output Impedance

5,000 ohms, nominal

Operating Level

Audiocom: 1 V<sub>RMS</sub>, nominal

RTSTW/ClearCom: 775 mVRMS, nominal

## 4-Wire Ports

Input Impedance

10k ohms, nominal

Output Impedance

200 ohms

Operating Levels

-10 dBu, 0 dBu, +4 dBu, +8 dBu, +12 dBu

## System to System

Frequency Response

200 Hz to 3.5 kHz,  $\pm 4$  dB

THD:  $\leq 1\%$  @ channel output with nominal input

## Environmental

Operating Temp

-20°C to 50°C (-4°F to 122°F)

Storage Temp

-40°C to 85°C (-40°F to 185°F)

Humidity

0 to 95%, non-condensing

## Main Voltage

100 to 250 VAC, 50/60 Hz

## Dimensions

1.72" (44mm) High x 8.19" (208mm) Wide x 8.0" (204mm) deep

## Weight

5.0lbs (2.3kg)

## Finish

Thermoplastic front panel, aluminum case, light gray finish

## Approvals

UL, CSA, UDE, CD

Specifications subject to change without notice.



---

### *Mounting*

Place the DSI 2008 on a desktop, or install it in an equipment rack using an RTS MCP Rack Mount Kit. Several rack mount options are available. There are no special ventilation requirements for the DSI 2008, but allow for ventilation around the power pack.

- If the DSI 2008 has the call signal option, the power indicator flashes whenever a call signal is received from either 2-wire line, and activity on the level display helps to indicate which line is calling. If the DSI 2008 is physically positioned near the 4-wire operator, this can be used as an incoming call indication for the 4-wire system, if desired (although other methods are available as described in “4-Wire Call Signal Connections” on page 10).

**NOTE:** You may wish to read about the internal mode DIP switches before mounting the DSI 2008. For further information, see Table 3 on page 20.

---

### *4-Wire Audio Connections*

#### **ADAM, ADAM-CS, or Zeus Audio Connection**

1. Use standard 9-pin or RJ-11 keypanel cables. Connect from one port of your intercom system to J2A or J3A (System A connection) on the back of the DSI 2008. Connect from another port to J2B or J3B (System B connection).
2. On the DSI 2008 front panel, set the 4W LEVEL REF SEL switches to the +8 dB position.

---

## Audio Connections for the Other 4-wire Communications Systems

1. Construct 9-pin or RJ-11 cables to connect from the 4-wire system to the DSI 2008. To connect to the System A hybrid, use either J2A or J3A; for the System B hybrid, use either J2B or J3B. Pin connections are as follows:

### 9-Pin Connection

#### Connector Type: 9-pin male D-subminiature

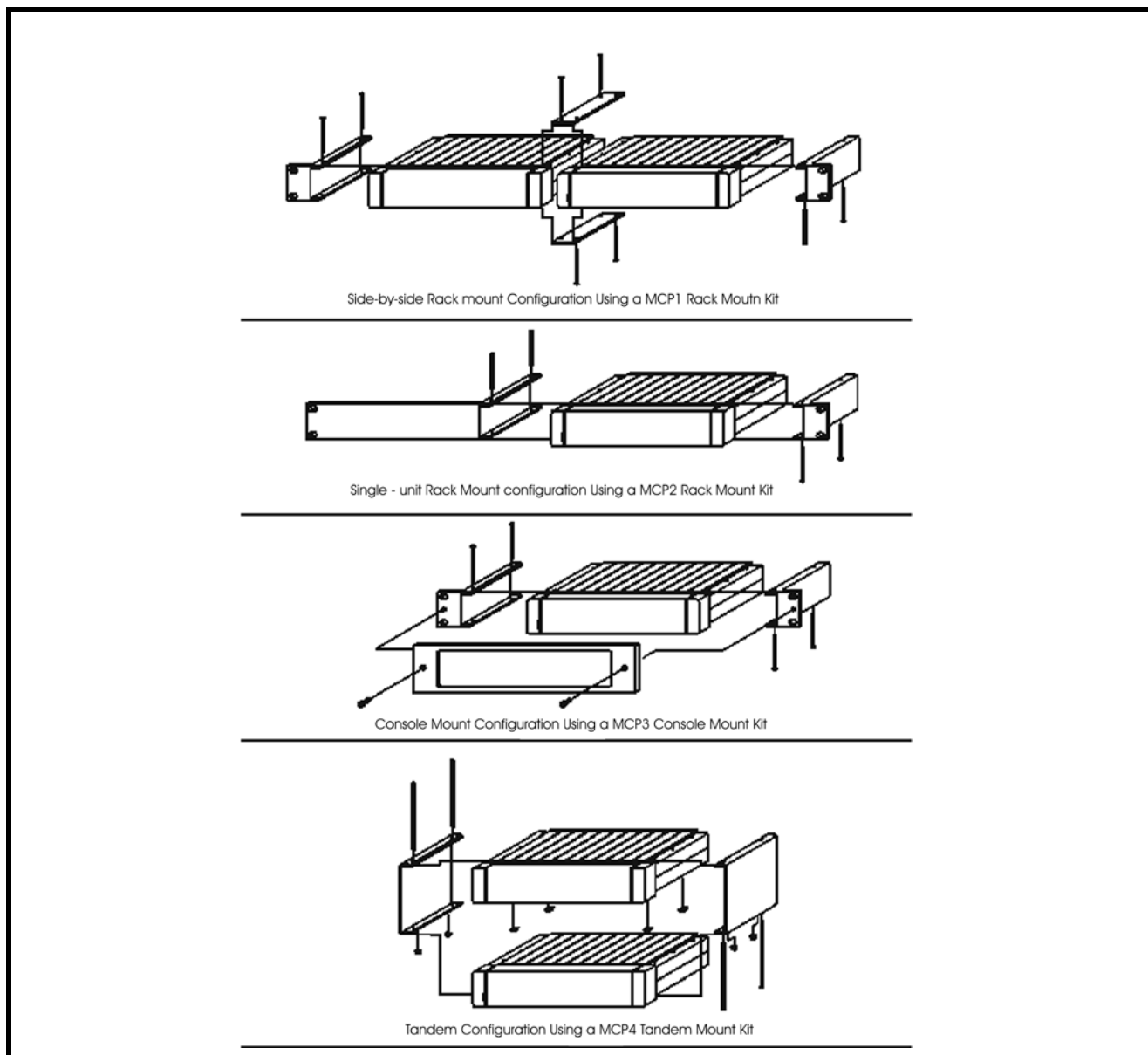
Pin 1	No connection
Pin 2	No connection
Pin 3	No connection
Pin 4	Balanced Audio + 4-wire output
Pin 5	Balanced Audio - 4-wire output
Pin 6	No connection
Pin 7	Balanced Audio - 4-wire input
Pin 8	Balanced Audio + 4-wire input
Pin 9	No connection

### RJ-11 Connection

#### Connector Type: RJ-11 plug

Pin 1	No connection
Pin 2	Balanced Audio + 4-wire input
Pin 3	Balanced Audio + 4-wire output
Pin 4	Balanced Audio - 4-wire output
Pin 5	Balanced Audio - 4-wire input
Pin 6	No Connection

2. On the DSI 2008 front panel, set the 4W LEVEL REF SEL switches to the position which most closely matches the audio input and output levels of your 4-wire system. If you don't know the levels, select the +8 dB position for now.



**FIGURE 2.** Rack Mount Configurations

## *2-Wire Audio Connections*

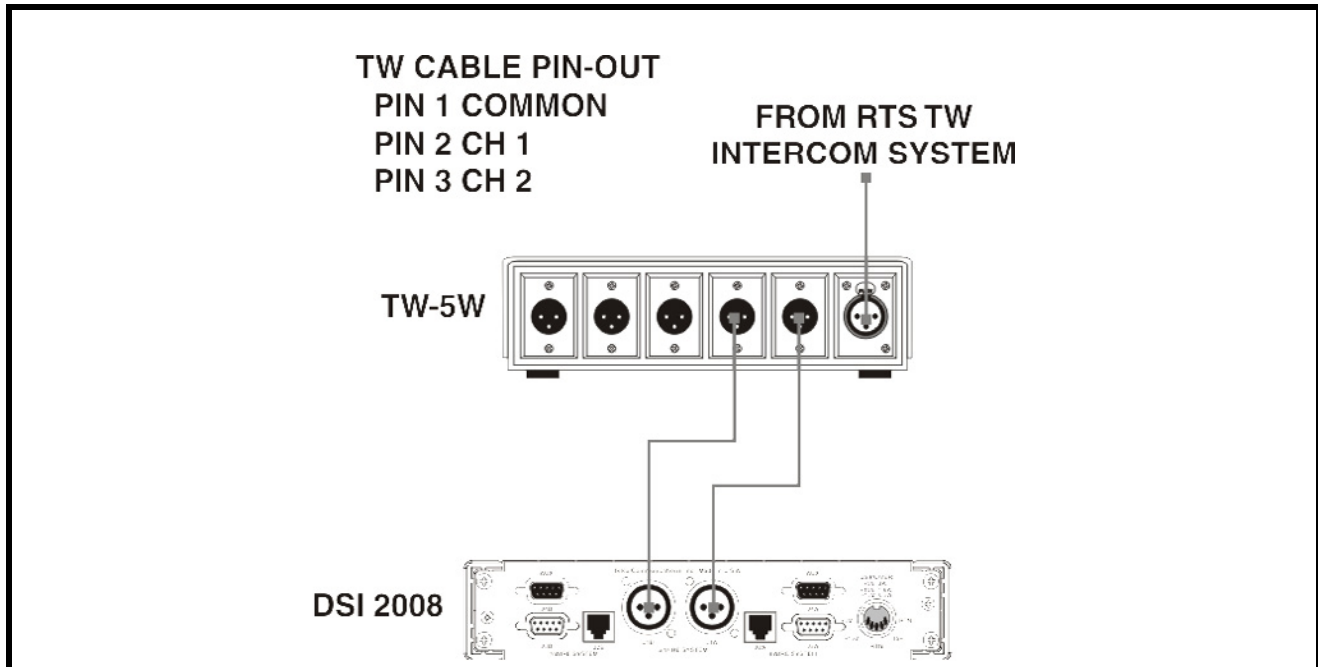
### **RTS TW Audio Connections**

1. Use standard TW intercom cables. Standard TW system cables can carry either one or two channels, while each hybrid in the DSI 2008 can only interface one TW channel to one 4-wire channel, which channel is determined by the front panel 2W CHAN SEL switch. If your TW system cable is only carrying one channel, or if you only need to connect one of two channels, connect directly to J1A (System A) or J1B (System B). If your TW system cable is carrying two channels, and you want to connect to both, use a TW-5W or similar device as shown in Figure 3 on page 8.

**NOTE:** The DSI 2008 features internal DC isolation. You can therefore connect to the DSI 2008 to powered TW cables, and it will not draw any power from the TW system.

2. On the DSI 2008 front panel: For System A and System B, set the 2W CHAN SEL switch to the appropriate position. To interface to TW channel 1 select position 1; for TW channel 2, select position 2.

**NOTE:** If the System A or System B will not be used, set the 2W CHAN SEL switch to the OFF position and attach a dummy load to the TW XLR connector.



**FIGURE 3.** Using a TW-5W to connect to two TW channels to the DSI 2008

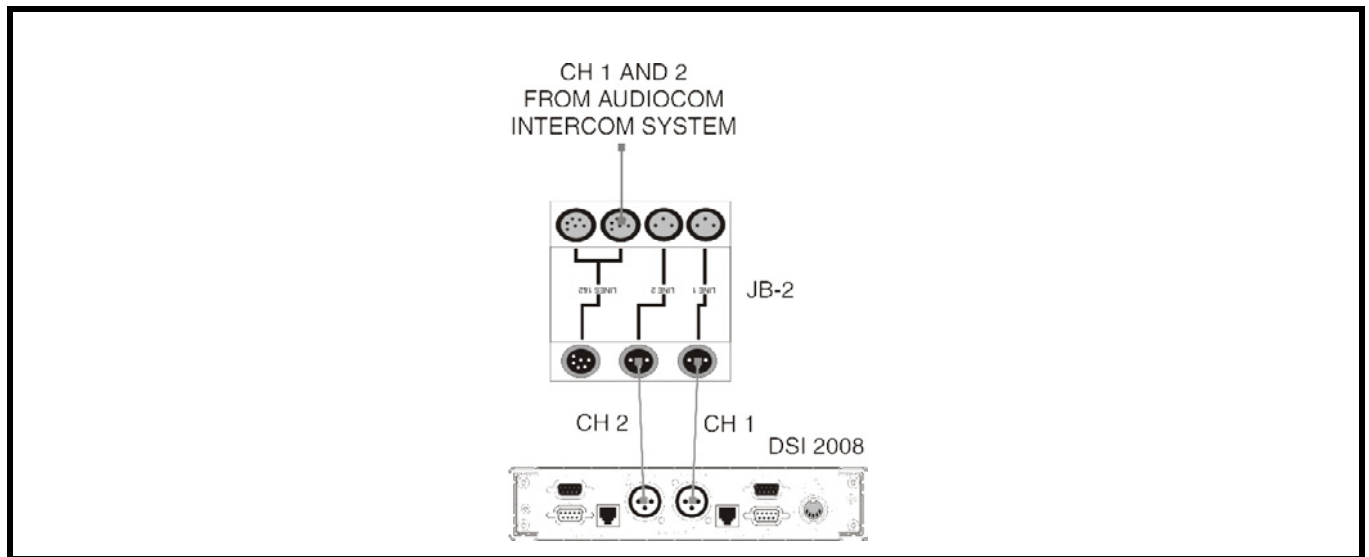
### Audiocom Audio Connection

1. You can directly connect standard Audio 1-channel cables. Connect one Audiocom channel to the J1A connector on the back of the DSI 2008 (System A). Connect a second Audiocom channel to the J1B connector (System B). If your Audiocom system uses 2-channel cables, use a JB-2 Junction Box to split the channels (Figure 4)

**NOTE:** The DSI 2008 features internal DC isolation. You can therefore connect the DSI 2008 to powered Audiocom cables, and it will not draw any power from the Audiocom system.

2. On the DSI 2008 front panel, set the 2W CHAN SEL switches for System A or System B to the BAL position.

**NOTE:** If System A or System B hybrid will not be used, set the 2W CHAN SEL switch to the OFF position and attach a dummy load to the TW XLR connector.



**FIGURE 4.** Using a JB-2 Junction Box to split a 2-channel Audiocom cable into two 1-channel cables.

### Clear-Com Audio Connection

1. Use standard Clear-Com 3-pin cables. Connect one Clear-Com party line to the J1A connector on the back of the DSI 2008 (System A). Connect a separate Clear-Com party line to the J1B connector (System B).

**NOTE:** The DSI 2008 features internal DC isolation. You can therefore connect the DSI 2008 to powered Clear-Com cables, and it will not draw any power from the Clear-Com system.

2. On the DSI 2008 front panel, set the System A and System B 2W CHAN SEL switches to position 2.

**NOTE:** If the System A or System B hybrid will not be used, set the 2W CHAN SEL switch to the OFF position and attach a dummy load to the TW XLR connector.

### Other 2-wire Audio Connection

1. Use the J1A connector on the back of the DSI 2008 to connect one 2-wire line to the System A hybrid. Use the J1B connector to connect a second 2-wire line to the System B hybrid. The pin configuration for the J1A and J1B connectors depend on whether you are connecting a balanced or unbalanced 2-wire line, as follows:

**NOTE:** TW systems must provide termination on the audio channel.

#### Balanced Configuration

- Pin 1 No Connection
- Pin 2 Balanced Audio + Input/Output
- Pin 3 Balanced Audio - Input/Output

\*\* Termination 300  $\Omega$

There are two possible configurations for unbalanced connection:

#### Unbalanced Configuration 1

- Pin 1 Audio Common
- Pin 2 Audio Input/Output
- Pin 3 No Connection

\*\* Termination 200  $\Omega$

---

## Unbalanced Configuration 2

Pin 1        Audio Common  
Pin 2        No Connection  
Pin 3        Audio Input/Output

\*\* Termination 200  $\Omega$

2. On the DSI 2008 front panel, set the CHAN SEL switches as follows:
  - **Balanced Configuration:** set the CHAN SEL switches to the BAL position.
  - **Unbalanced Configuration 1:** set the CHAN SEL switches to position 1.
  - **Unbalanced Configuration 2:** set the CHAN SEL switches to position 2.

**NOTE:** If System A or System B will not be used, set the 2W CHAN SEL switch to the OFF position and attach a dummy load to the TW XLR connector.

---

## 4-Wire Call Signal Connections

**NOTE:** These connections require the call signal option.

### Call Signal Connection for ADAM, ADAM CS, and Zeus

You can use the General Purpose Interface (GPI) connector to interface call signals. The pin-out of the connector is the same for all of these intercom systems Table 1 on page 11.

**ADAM GPI Connector:** XCP-ADAM-MC, J11

**ADAM CS GPI Connector:** J903

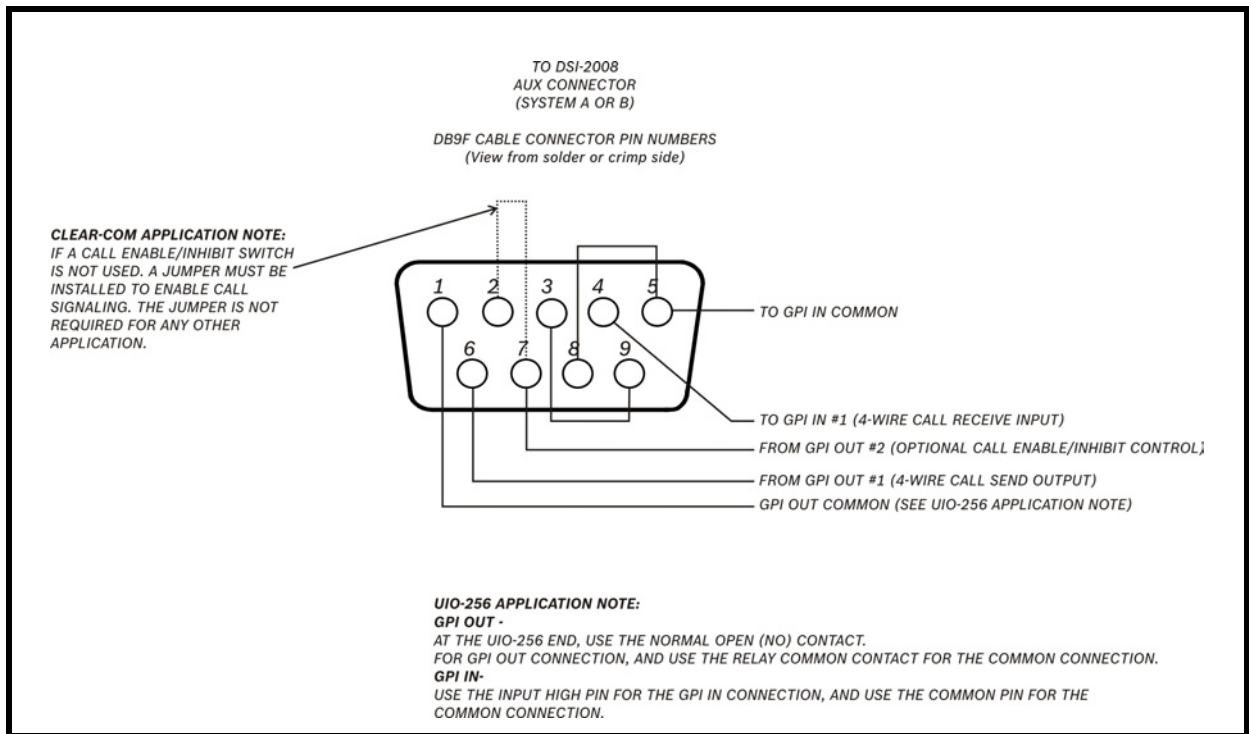
**Zeus GPI Connector:** J27

If your intercom system is equipped with a UIO-256 (Universal Input/Output) Frame, you can also use that for connections (Table 1 on page 11 and Table 2 on page 12).

As an alternative to using the GPI, you can use external components to send and receive call signals as described in “Call Signal Connections for other 4-wire Communications Systems” on page 13.

Typical GPI connections are shown in Figure 5 on page 11. The example uses GPI outputs #1 and #2 and GPI Input #1. You may substitute other GPI Input and Outputs.

**IMPORTANT:** AZedit version 1.06 or higher includes a feature which allows you to invert the action of the GPI outputs. By default, these output are set to duplicate the action of the RTS FR9528 Relay Frame accessory. This is the correct setting for use with the DSI 2008. To check the AZedit setting, select Intercom Configuration in the Options menu. Click on the Options tab, then verify that **Configure onboard GPI outputs in FR9528 mode** is selected.



**FIGURE 5.** Call signal connections for ADAM, ADAM CS, and Zeus Intercom Systems. This example uses GPI outputs #1 and #2 and GPI Input #1; however, you may use any other available GPI inputs and outputs. The Call Enable/Inhibit connection is optional. It gives you the ability to disable call signalling using a GPI output. However, when connecting to a Clear-Com intercom system, if an enable/inhibit switch is not connected, a jumper must be installed for any other application. You DO NOT have to use GPI outputs for call signalling or enable/inhibit, you can use simple switches instead, as shown in Figure 6 on page 13.

**TABLE 1.** GPI Connector Pin-out (ADAM, ADAM CS, and Zeus)

Pin No.	Function
1	GPI Input #1 High (5-18 VDC)
2	GPI Input #2 High (5-18 VDC)
3	GPI Input #3 High (5-18 VDC)
4	GPI Input #4 High (5-18 VDC)
5	GPI Input #5 High (5-18 VDC)
6	GPI Input #6 High (5-18 VDC)
7	GPI Input #7 High (5-18 VDC)
8	GPI Input #8 High (5-18 VDC)
9	Common*
10	Common*
11	Common*
12	Common*
13	Common*
14	GPI Out #1
15	GPI Out #2

**TABLE 1.** GPI Connector Pin-out (ADAM, ADAM CS, and Zeus)

Pin No.	Function
16	GPI Out #3
17	GPI Out #4
18	GPI Out #5
19	GPI Out #6
20	GPI Out #7
21	GPI Out #8
22	Common*
23	Common*
24	Common*
25	Common*

\*Use any available common pin with any GPI Input or Output.

**TABLE 2.** UIO-256 GPI Input Connector (J7)

GPI INPUT NUMBERS <sup>a</sup>				GPI INPUT PIN NUMBERS	
UIO-256 Frame #1	UIO-256 Frame #2	UIO-256 Frame #3	UIO-256 Frame #4	Common	Input Height (5-18 VDC)
1	17	33	49	9	34
2	18	34	50	10	35
3	19	35	51	11	36
4	20	36	52	12	37
5	21	37	53	13	38
6	22	38	54	14	39
7	23	39	55	15	40
8	24	40	56	16	41
9	25	41	57	1	26
10	26	42	58	2	27
11	27	43	59	3	28
12	28	44	60	4	29
13	29	45	61	5	30
14	30	46	62	6	31
15	31	47	63	7	32
16	32	48	64	8	33

a. Dependent on UIO-256 DIP Switch SW1 Settings for Input/Output Range as summarized in the UIO-256 Manual.



GPI OUTPUT NUMBERS <sup>a</sup>				RELAY CONTACT PIN NUMBERS		
UIO-256 FRAME #1	UIO-256 FRAME #2	UIO-256 FRAME #3	UIO-256 FRAME #4	NORMAL CLOSED (NC) CONTACT	COMMON CONTACT	NORMAL OPEN (NO) CONTACT
1	17	33	49	38	13	40
2	18	34	50	39	14	15
3	19	35	51	41	16	43
4	20	36	52	42	17	18
5	21	37	53	44	19	46
6	22	38	51	45	20	21
7	23	39	55	41	22	49
8	24	40	56	48	23	24
9	25	41	57	26	1	28
10	26	42	58	27	2	3
11	27	43	59	29	4	31
12	28	44	60	30	5	6
13	29	45	61	32	7	34
14	30	46	62	33	8	9
15	31	47	63	35	10	37
16	32	48	64	36	11	12

a. Dependent on UIO-256 DIP Switch SW1 Settings for Input/Output Range as summarized in the UIO-256 manual.

## Call Signal Connections for other 4-wire Communications Systems

### 4-wire Call Send and Call Enable/Inhibit

The DSI 2008 accepts a switch-contact input from the 4-wire system and then generates a call signal output to the 2-wire system. The DSI 2008 also accepts an optional switch contact input to enable or inhibit call signaling between the 4-wire and 2-wire systems. Figure 6 shows the typical connections.

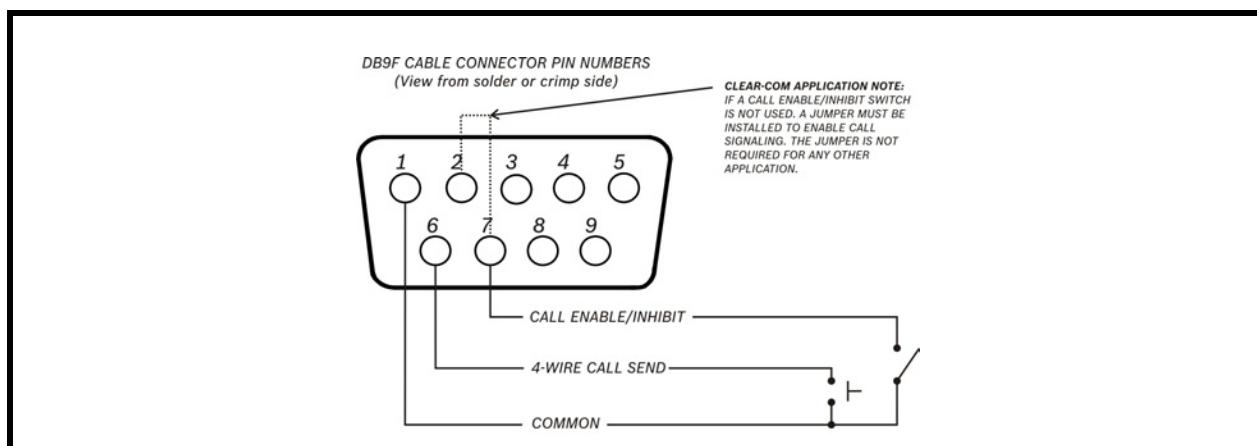
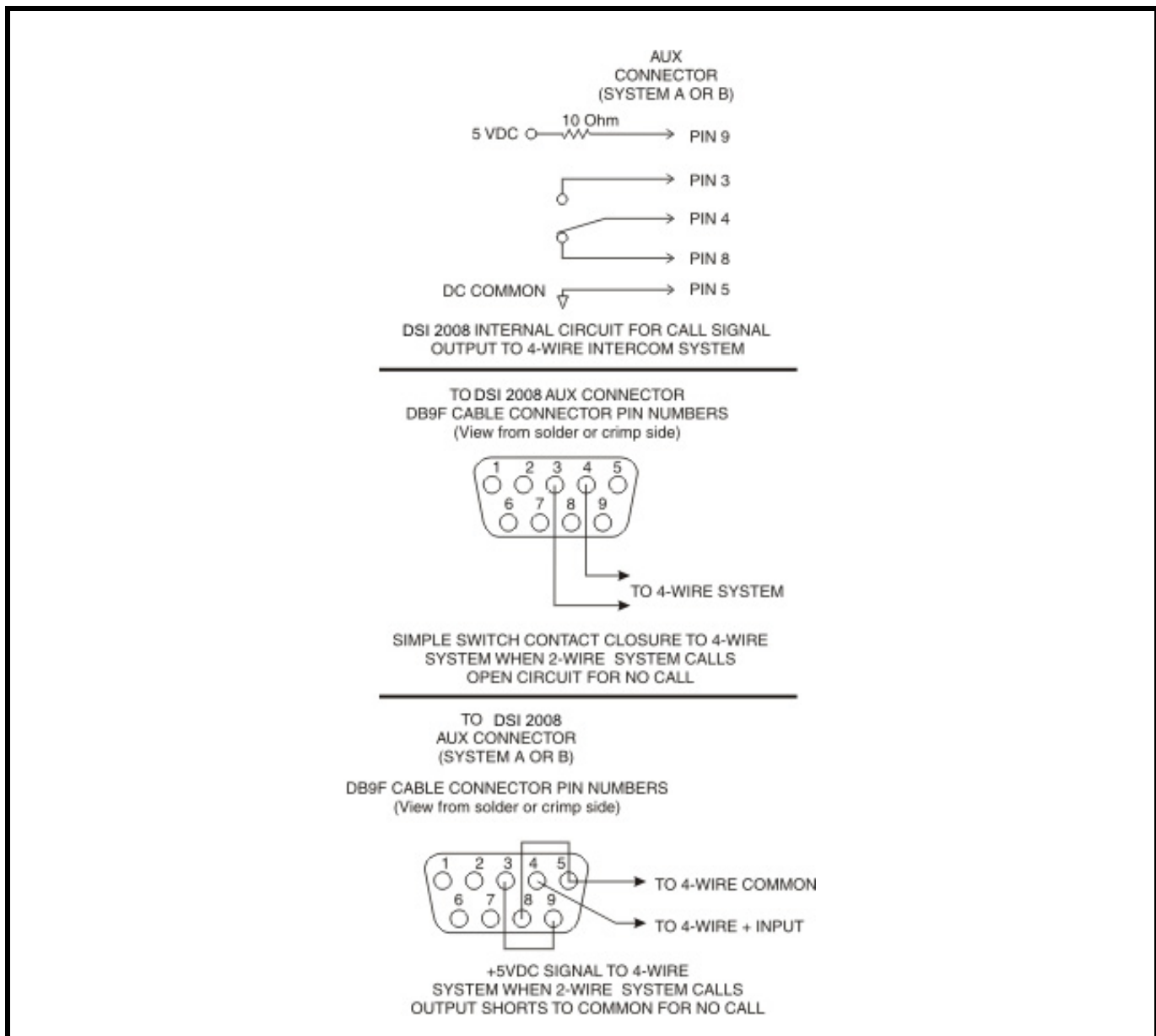


FIGURE 6. Typical call send and call enable/inhibit connections for a 4-wire intercom system.

## 4-wire Call Receive

The DSI 2008 receives call signals from the 2-wire system, then converts this to relay contact closure for use as a 4-wire call receive indication. The DSI 2008 also provides +5 VDC which can be connected to the relay contacts to generate a DC output signal instead of a contact closure. Connections for a simple contact are shown in Figure 7 on page 14.



**FIGURE 7.** Call signal connections for a 4-wire intercom system other than ADAM, ADAM CS and Zeus.

## 2-Wire Call Signal

### Call Signal Connections for Audiocom, RTS TW and Clear-Com

The call signals are superimposed on the audio signal, so no separate call signal connections are required. However, make sure that a call enable switch or jumper is installed for Clear-Com applications as shown in Figure 6 on page 13 and Figure 7.

---

## Call Signal Connections for Other 2-Wire Communication Systems

Any other 2-wire device must be able to generate and receive a 20 kHz signal superimposed on the audio as follows:

### Balanced Audio Configuration

Pin 1	No Connection
Pin 2	Balanced 20 kHz + Input/Output
Pin 3	Balanced 20 kHz - Input/Output

DSI 2008 Signal Specifications for balanced configuration:

DSI 2008 Receive: 20 kHz  $\pm 100$  Hz, 100 mV<sub>RMS</sub>

DSI 2008 Send: 20 kHz  $\pm 800$  Hz, 500 mV<sub>RMS</sub>  $\pm 10\%$

### Unbalanced Configuration 1

Pin 1	20 kHz Common
Pin 2	20 kHz Input/Output
Pin 3	No Connection

,

### Unbalanced Configuration 2

Pin 1	20 kHz Common
Pin 2	No Connection
Pin 3	20 kHz Input/Output

DSI 2008 Signal Specifications for unbalanced configuration:

DSI 2008 Receive: 20 kHz  $\pm 100$  Hz, 100 mV<sub>RMS</sub>

DSI 2008 Send: 20 kHz  $\pm 800$  Hz, 350 mV<sub>RMS</sub>,  $\pm 10\%$



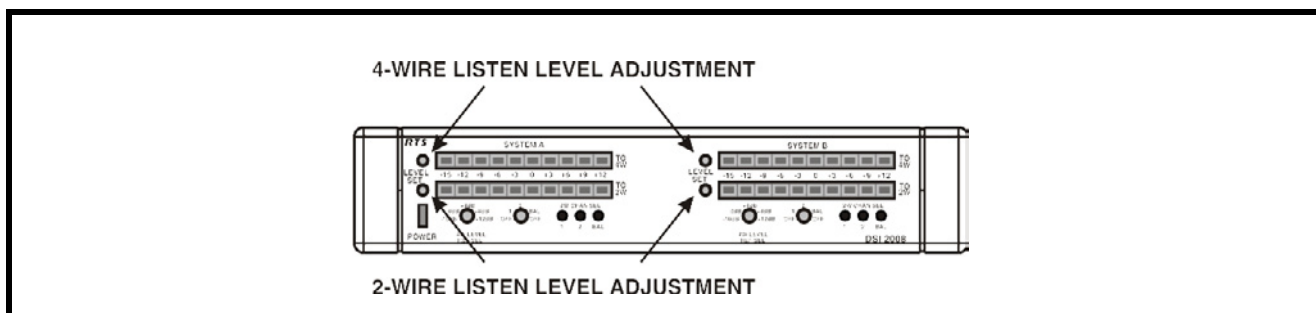
*General Instructions*

1. Attach the **power pack** to the DSI 2008.
2. Apply **power** to all components.
3. Confirm the **power indicator** is lit on the DSI 2008 front panel.

**NOTE:** The power indicator flashes when a call signal is received from a 2-wire line, if the call signal option board is attached. The DSI 2008 level displays should help to confirm which line is calling.

4. Use the **level adjust trimmers** (Figure 8) to fine tune the listen levels.

**NOTE:** For 4-wire systems other than ADAM, ADAM CS, and Zeus, you may have to change the setting of the 4W LEVEL REF SEL control to establish the correct level. For 2-wire system other than Audiocom, TW, and Clear-Com, you may have to adjust the level at the 2-wire system if you cannot establish the correct level with the 2-wire listen level trimmers.



**FIGURE 8.** Location of level adjust trimmers

---

## Operating Notes for ADAM, ADAM CS and Zeus Intercom Systems

1. In AZedit use port alpha setup to name each 4-wire intercom port that is connected to the DSI 2008. Choose names which help indicate which 2-wire line is being interfaced.
2. Key assignment, party line assignment, etc. is the same as for any other intercom port.
3. Optional call signal output using the GPI: you can assign the GPI output to a talk or listen key, then activate that key to generate a call signal.

Another way to generate a call signal is by assigning the GPI output as a level 2 talk key assignment for any key that is assigned to talk to the DSI 2008. However, this will cause the call lights to flash on the 2-wire line during the entire conversation.

Another solution is to assign a dedicated key as a UPL resource key (which you could name CALL). Then for each key that talks to an DSI 2008 hybrid, create a UPL statement that will activate the appropriate GPI whenever the call key and the talk key are pressed. This lets you use the same call key with more than one GPI. To use, simply activate the call key and the appropriate talk key. Then, when a verbal response is received, release the call key.

4. Optional call signal input using the GPI
  - In AZedit, click **GPI In** on the toolbar.  
*This opens the GPI Setup screen.*
  - Whichever GPI Input you are using for 4-wire call receive, select that **GPI Input** from the list (double-click).  
*This will open the Edit GPI Input window.*
  - In the Port Alpha list box, select the **intercom port** that is named in step 1.
  - In the Key Number box, type **1**.  
*This selects key 1 at the intercom you specified in the previous step.*
  - Select **Talk Key**.
  - Click **Done**.
  - Access keypad setup, and select the **intercom port** that is named in step 1.  
*Make sure the setup page, Main is selected.*
  - Assign **talk key number 1** to talk to the intercom port that you selected in step C. We also recommend that you assign auto-listen (AL) to the listen key above that talk key.
5. Optional call enable control. If you connected a GPI Output for use as a call enable control, you can assign that GPI output to any intercom key in the 4-wire intercom system. If System A is connected to an Audiocom or TW intercom system, pressing the key will disable the call signaling. (However, the effect is opposite if a Clear-Com system is connected: pressing the key will disable the signaling.)
6. Send your changes to the intercom system. This completes any required programming for ADAM, ADAM CS, or Zeus intercom system.

# Access and Configuration

## Internal Access

1. Remove **six screws** from the back cover (see Figure 9).
2. Remove the **top cover**.  
*This provides access to all internal adjustments.*
3. For option card installation, slide the **circuit board** out toward the back to remove it from the bottom cover.

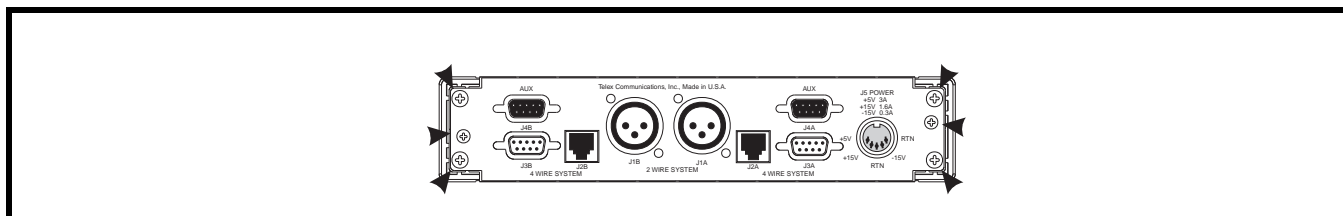


FIGURE 9. Location of screws for disassembly.

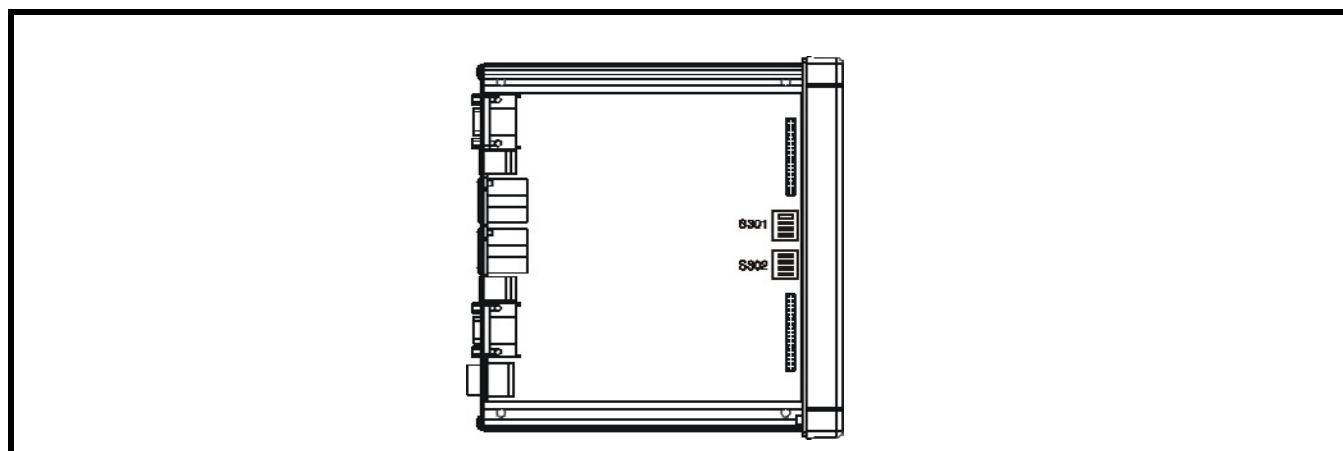


FIGURE 10. Locations of internal controls

---

## Mode Dip Switch Settings U301

S301 controls the operating mode for System B and S302 controls the operating mode for System A.

Settings are summarized as follows:

**TABLE 3.** Mode DIP Switch Settings for Programmed Chip P/N 90157640500 (version 1.0)

Switch Settings				Description
1	2	3	4	
Open	Open	Open	Open	Configuration 1, Full-Duplex Mode (Default)
Closed	Open	Open	Open	Configuration 2, Half-Duplex Mode
Open	Open	Open	Closed	Configuration 3, Tone Test Mode

**Full-Duplex Definition:** Both sides of the line can talk simultaneously.

**Half-Duplex Definition:** Only one side of the line can talk at a time and the other side must wait until the first side is done talking before responding. 4-wire systems have priority over 2-wire system in Half-duplex mode.

**Tone Test Mode:** Disables internal suppression of tones.

**TABLE 4.** Mode DIP Switch Settings for Programmed Chip P/N 90157640500 (version 1.1)

Switch Settings				Description
1	2	3	4	
Open	Open	Open	Open	Configuration 1, Full-Duplex Mode (Default)
Closed	Open	Open	Open	Configuration 2, Half-Duplex Mode
Open	Open	Open	Closed	Configuration 3, Full-Duplex Mode, Noise Suppression Disabled

**Full-Duplex Definition:** Both sides of the line can talk simultaneously.

**Half-Duplex Definition:** Only one side of the line can talk at a time and the other side must wait until the first side is done talking before responding. 4-wire systems have priority over 2-wire system in Half-duplex mode.

**Noise Suppression:** The unit suppresses background noise in absence of speech. Configuration 3 disables this suppression.

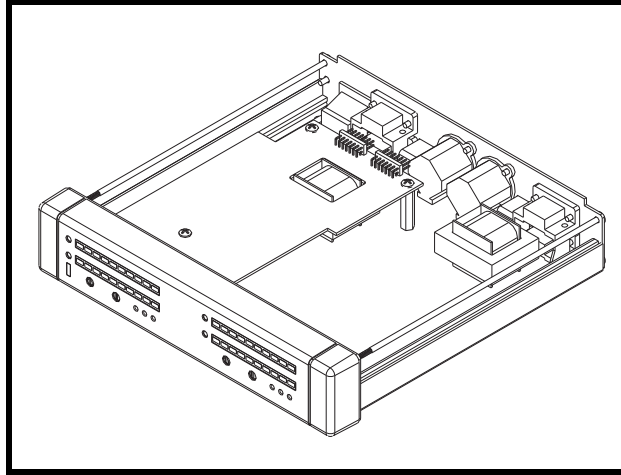


---

## *Call Signal Option Card Installation*

To **install a Call Signal Option Card in a DSI 2008 that was originally ordered without it**, do the following:

1. Disassemble the **DSI 2008** as previously described.
2. Assemble the **standoffs** to the circuit board using the supplied screws and lock-washers.
3. Connect the **supplied power cable** from J8 on the option card to J303 on the main board of the DSI 2008.
4. Insert the **connectors** on the option card into the connectors on the main board.
5. Use the remaining screws and lock-washers to secure the **standoffs** to the main board.
6. Reassemble the **DSI 2008**.



**FIGURE 11.** The Call Signal Option Card after installation in the DSI 2008.

---

